

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Turnquist, Norman et al.

Group Art Unit:

Serial No.:

Examiner:

Filed:

For USE OF SPRAY COATING TO ACHIEVE
NON-UNIFORM SEAL CLEARANCES IN
TURBOMACHINERY

INFORMATION DISCLOSURE STATEMENT

- ☒ 1 **Pursuant to 37CFR 1.97(b)**
[within 3 months of national, non-CPA filing or prior to 1st Office Action] *no charge*
- ☐ 2 **Certification Pursuant to 37 CFR 1.97(c)(1)**
[before Final Office Action, Allowance, or other action closing prosecution] *no charge*
- ☐ 3 **Fee Payment Pursuant to 37 CFR 1.97(c)(2)**
[before Final Office Action, Allowance, or other action closing prosecution] *\$180.00*
- ☐ 4 **Certification & Fee Payment Pursuant to 37 CFR 1.97(d)**
[On or before issue fee payment] *\$180.00*

ATTN: BOX PATENT APPLICATION
Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

The following are submitted in the above application in compliance with 37 CFR 1.97 and 37 CFR 1.98:

- ☒ 5 A list of documents on form PTO-1449 or Substitute together with copies of each identified document and a translation thereof or a concise explanation of each non-English language document or a Search Report from an International Searching Authority for a patent application filed via the Patent Cooperation Treaty or document(s) cited in the application or the priority application.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on the date indicated below.

Date of Deposit_____
Type or Print Name_____
Signature

This paper is submitted in accordance with:

- ☒ 6 37 CFR 1.97(b): [within 3 months of national, non-CPA filing or prior to 1st Office Action]
- ☐ 7 37 CFR 1.97(c): [before Final Office Action, Allowance, or other action closing prosecution, whichever is earlier]; and
- ☐ 8 The required Certification made in item 11 below; or
- ☐ 9 The \$180.00 fee specified in 37 CFR 1.17(p) for submission of this Information Disclosure Statement is authorized in item 15 below.
- ☐ 10 37 CFR 1.97(d): [on or before issue fee payment]; and
- a) The required Certification is stated in item 11 below; and
- b) The \$180.00 fee specified in 37 CFR 1.17(p) for submission of this Information Disclosure Statement is authorized in item 14 below.
- ☐ 11 Certification
- ☐ 12 Each item of information contained in this Statement was first cited in any communication from a foreign patent office in a counterpart foreign patent application not more than three months prior to the filing of this Statement; or
- ☐ 13 No item contained in this Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the person signing this document after making reasonable inquiry, no item of information contained in this Statement was known to any individual designated in 37 CFR 1.56(c) more than three (3) months prior to the filing date of this Statement.
- ☒ 14 Payment of all applicable fees:
- ☒ 15 Please charge all applicable fees associated with the submittal of this Information Disclosure Statement to Deposit Account No. 07-0868

An original and two (2) copies of this document are enclosed.

Respectfully submitted,

11 December 2003

Date

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FORM PTO-1449 (REV. 7-80)				U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. 129234		SERIAL NO.			
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <u>LIST OF ITEMS</u>								Applicant Turnquist, et al			
								Filing Date		Group	

U.S. PATENT DOCUMENTS							
*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	Filing Date If Appropriate	
	AA	5,962,076	Mason, et al				
	AB	6,089,825	Walden, et al				
	AC	6,334,617	Putnam, et al				
	AD	6,352,264	Dalzell, et al				
	AE	6,533,285	Nava, et al				
	AF	6,547,522	Turnquist, et al				

FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO

OTHER INFORMATION (Including Author, Title, Date, Pertinent Pages, etc.)		
	C1	UP Phadke, et al, "Aerodynamic aspects of the sealing of gas-turbine rotor-stator systems Part 1: The behavior of simple shrouded rotating-disk systems in a quiescent environment", June 1988, Int. J. Heat and Fluid Flow, Vol. 9, pp: 98-105
	C2	UP Phadke, et al, "Aerodynamic aspects of the sealing of gas-turbine rotor-stator systems Part 2: The performance of simple seals in a quasi-axisymmetric external flow", June 1988, Int. J. Heat and Fluid Flow, Vol 9, pp: 106-112
	C3	UP Phadke, et al, "Aerodynamic aspects of the sealing of gas-turbine rotor-stator systems Part 3: The effect of nonaxisymmetric external flow on seal performance", June 1988, Int. J. Heat and Fluid Flow, Vol 9, pp: 113 - 117
	C4	TN Rhys-Jones, 1990, "Thermally Sprayed coating systems for surface protection and clearance control applications in aero engines", Surface and Coatings Technology, 43/44, pp: 402-415

EXAMINER	DATE CONSIDERED
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant
